

### **REMARKS**

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1, 6-8, 13-15, 18-20, 23, and 24 are pending. Claims 1, 8, 15, and 20 are amended. Claims 1, 8, 15, and 20 are independent. The Examiner is respectfully requested to reconsider the rejections in the Office Action in view of the amendments and remarks set forth herein.

#### **Specification Changes**

The paragraph beginning on page 3, line 8 of the specification is amended so that the wording describing air vents 4 is now consistent with what is shown in FIG. 1.

#### **Rejection Under 35 U.S.C. §103(a)**

Claims 1, 6-8, 13-15, 18-20, 23, and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Whittenberger et al (U.S. 5,651,906) in view of Kohno et al. (U.S. 5,653,825), Arai et al. (U.S. 5,151,254), and either of Toyoda et al. (U.S. 5,336,472) and Maus (U.S. 4,713,361). These claims are further rejected as being unpatentable over Honma (U.S. 5,323,608) in view of Kohno et al., Arai et al., and either of Toyoda et al. and Maus. These rejections are respectfully traversed.

While not conceding the appropriateness of the rejection, but merely to advance the prosecution of the present application, independent claims 1, 8, 15, and 20 are amended herein to recite combinations of elements directed to a metal carrier for a catalyst, including

the honeycomb structure having air vents which are substantially equal in size, and having alternating waved plates and base plates, the waved plates having sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively.

Full support for the honeycomb structure having air vents 4 which are substantially equal in size and alternating waved plates 7 and base plates 8, the waved plates having sections that are substantially flat, and each of the base plates 8 having an inner and an outer surface being disposed against the flat sections of adjoining ones of the waved plates 7 located inwardly and outwardly thereof, respectively, can be seen in FIG. 1.

Since the metal carrier for the catalyst is provided with a honeycomb structure having air vents which are substantially equal in size and alternating waved plates and base plates, the waved plates having sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively, a metal carrier for the catalyst provided by the present invention has excellent strength, high temperature oxidation resistance, good deformation resistance, and a simple structure.

The Applicants respectfully submit that none of the references cited by the Examiner teaches or suggests a honeycomb structure having air vents which are substantially equal in size and alternating waved plates and base plates, the waved plates having sections that are substantially flat, and each of the base plates having an inner and an outer surface being

disposed against the flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively

For example, **Whittenberger** merely discloses air vents formed by corrugated or involute core elements and which vary in size, and **Honma** merely discloses a corrugated sheet having a continuous "S" shape, and neither of these teaches or suggests a honeycomb structure having alternating waved plates and base plates, the waved plates having sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively.

**Kohno et al.** merely disclose stainless steel sheets having a Mo content of not more than 2.0%, and **Arai et al.** merely disclose coating a catalyst layer. Neither of these references provides any teaching or suggestion about size of the air vents or about flat sections on the waved plate.

Regarding the **Toyoda et al.** and **Maus** documents, these references also fail to teach or suggest the honeycomb structure having alternating waved plates and base plates, the waved plates having sections that are substantially flat, and each of the base plates having an inner and an outer surface being disposed against the flat sections of adjoining ones of the waved plates located inwardly and outwardly thereof, respectively.

Moreover, the **Toyoda et al.** document discloses a corrugated plate 3 being welded along a narrow line (rather than a substantially flat area) to a flat plate 1 to form a multilayer. Moreover, two flat plates 1 are used in a pair between each corrugated plate (see FIG. 5). Thus, only one surface of the each flat plate faces a corrugated, while the other surface faces another

flat plate. The complicated structure disclosed by **Toyoda et al.** appears to be required in order to allow for both the transmission of heat from one multilayer to the next, while at the same time accommodating the differing deformations of each multilayer.

While **Maus** teaches alternating waved and base plates, the waved plates of **Maus** are not formed with flat sections, as set forth in the claims of the present invention.

Thus, it is respectfully submitted that the cited references, taken alone or in combination, fail to teach or suggest the novel combination of elements of the present invention. Accordingly, the rejection under 35 U.S.C. §103(a) has been overcome, and independent claims 1, 8, 15, and 20, as amended herein, as well as the claims depending therefrom, are believed to be in condition for allowance.

### **CONCLUSION**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 205-8000.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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